PATENT COOPERATION TREATY /511685

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 411.77693/002	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/GB 03/01689	International filing date *(day/month/year)* 17.04.2003	Priority date *(day/month/year)* 19.04.2002
International Patent Classification (IPC) or both national classification and IPC C12N1/20		
Applicant NORFERM DA et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the opinion
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
19.11.2003	23.04.2004
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Grötzinger, T Telephone No. +49 89 2399-7166

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB 03/01689

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, Pages

1-20 as originally filed

Claims, Numbers

1-14 as originally filed

Drawings, Sheets

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).

   ☐ the language of publication of the international application (under Rule 48.3(b)).

   ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   ☐ contained in the international application in written form.

   ☐ filed together with the international application in computer readable form.

   ☐ furnished subsequently to this Authority in written form.

   ☐ furnished subsequently to this Authority in computer readable form.

   ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   ☐ the description, pages:

   ☐ the claims, Nos.:

   ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	4-6,8-14
	No:	Claims	1-3,7
Inventive step (IS)	Yes:	Claims	9
	No:	Claims	4-6,8,10-14
Industrial applicability (IA)	Yes:	Claims	1-14
	No:	Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

D1 = DD290917
D2 = Bothe et al., Appl. Microbiol. Biotechnol. (4 April 2002) 59:33-39
D3 = WO01/60974

1. Novelty (Article 33.2 PCT)

1.1 Claims 1 to 3, and 7

Claims 1 to 3, and 7 are not new contrary to Article 33.2 PCT.

DD290917 (D1) discloses the culturing of Methylobacterium rhodesianum. The growth substrate comprises a hydrolysate of bacterial biomass (claim 1 on page 1). According to page 2 of the description, line 12, the hydrolysed biomass may be obtained from the used bacteria, i.e. from the methanotrophic bacteria of the species Methylobacterium rhodesianum.

Thus, DD290917 (D1) discloses the subject-matter of claims 1 to 3, and 7.

1.2 Claims 4 to 6, and 8 to 14 appear to be new in light of the cited prior art.

2. Inventive Step (Article 33.3 PCT)

2.1 Claims 4 to 6, 8, and 10 to 14

Claims 4 to 6, 8, and 10 to 14 appear to relate to standard ingredients of growth media as well as standard amounts thereof.

Therefore, inventive step according to Article 33.3 PCT cannot be acknowledged for these claims.

2.2 Claim 9

Claim 9 can be regarded as being inventive in compliance with Article 33.3 PCT.

Claim 9 relates to the use of a specific mixture of one methanotrophic and two heterotrophic bacteria for producing biomass for a bacterial growth medium. Although

such mixtures have already been used to produce biomass (see page 2 of the present application, third paragraph, and Bothe et al. (D2), abstract), and although that biomass has already been used to produce food or feed products (see WO01/60974 (D3), e.g., page 13, third paragraph), none of the cited prior art documents alone or in any combination appears to suggest the use of that specific biomass to produce bacterial growth medium.
Consequently, the subject-matter of claim 9 involves an inventive step.

3. Additional observations regarding Enabling Disclosure

3.1 Claim 9

As mentioned above, claim 9 relates to the use of a mixture of one specific methanotrophic and two specific heterotrophic bacteria for producing biomass for a bacterial growth medium.
Regarding the reference to deposited biological material, the PCT does not provide any unified criteria (see Rule 13bis.3(b) PCT). Before the EPO, for instance, an invention involving the use of biological material is only regarded as being disclosed as prescribed in Article 83 EPC if a sample of the biological material has been deposited with a recognised depositary institution not later than the filing date of the application (see Rule 28 EPC).